

**Remarks/Arguments:**

With this amendment, the applicants amend claims 1, 7, and 9. Claims 4, 5, and 8 are cancelled. Claims 11 and 12 are new. Claim 1 is amended to combine the features of previous claims 4 and 5. Support in the specification is found at page 2, lines 26-28 and page 2, line 31 bridging to page 3, line 2. See also Example 1, B and C. The preferred list of claimed metals can be found at page 3, lines 6 and 7. Corresponding amendments have been made to claim 9. Support for newly added claim 11 can be found at page 4, lines 29-31. Support for newly added claim 12 can be found at Example 1, B and C.

**I. Advisory Action Remarks**

The Advisory Action states that the previous proposed amendment in the applicants response after final did not place the application in a condition for allowance because the amendment amounted to no more than a recitation of an intended use of the sensor. The Advisory Action further stated that the applicants have expressed all the limitations using alternative language, never positively reciting the sensor in combination with a food product.

The applicants appreciate the Examiner's indication that the applicants have overcome the rejection of Harris et al.

The Advisory Action maintains the rejection of claims 1, 4, and 5 under 35 U.S.C. § 102(b) as anticipated by Suto (U.S. Patent 5,064,576). The Advisory Action states that the claimed sensor is recited in terms similar to a device, that is, it performs a function and that claiming a device in which it is to be employed does not differentiate it from the prior art. The Advisory Action states that Suto teaches the structural limitations as well as the implied functions of the claims.

The Advisory Action maintains the rejection of claims 1-7, 9, and 10 under 35 U.S.C. § 103(a) as being unpatentable over Wolfbeis et al. (U.S. Patent 5,407,829) in view of Moretti et al as evidenced by Dojindo Online. The Advisory Action states that Wolfbeis et al. teaches identifying the presence of sulfur compounds with food packages by observing a change in color of a sensor and differs only in the particular type of sensor. Moretti et al. also teaches identifying the presence of sulfur using palladium-calcein compounds. Thus, the Advisory Action states that the problem solved in each reference is the same, that is, identifying sulfur compounds utilizing a sensor that changes color in the presence of sulfur.

### **III. The Applicant's Remarks**

Amended claims 1 and 9 recite "wherein the metal is selected from the group consisting of palladium, platinum, ruthenium and iron." Suto does not disclose a metal co-ordinated complex wherein the metal is selected from the group consisting of palladium, platinum, ruthenium and iron. The applicants respectfully request withdrawal of the rejections under Section 102(b) using Suto.

In determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983). By simplifying the problem solved as just the detection of sulfur-containing compounds, the Examiner is distilling the invention down to its gist or thrust. Distilling an invention down to the "gist" or "thrust" disregards the requirement of analyzing the subject matter "as a whole." *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983). So too must the prior art references be considered in their entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *Id.* In this regard, the Examiner cannot pick and choose features of the prior art and combine them with the knowledge of the applicant's own invention.

The applicants submit that even if there was a motivation to combine the Wolfbeis et al. with Moretti et al., the resultant combination, if the references were properly viewed in their entirety, would not teach each and every limitation of the claimed invention. Wolfbeis et al. is directed to quality control of packaged organic substances by contacting the internal surface of a package with an optical sensor element. The sensor element changes visible color or fluorescence upon a change in the composition of the gas phase due to decay of the organic substances. The optical sensor element comprises lead (see column 4, line 37), mercury, or cadmium (see column 4, line 63). Since it would be undesirable for any of these metals to come into direct contact with the food, Wolfbeis et al. segregates the metal from the food by one of two techniques. In Figure 1, the metal is in the indicator layer 11 and is covered by a gas-permeable, hydrophobic polymer film 12 (see column 4, lines 2-4). In the embodiment shown in Figure 2, the sensor element is a gas-permeable, hydrophobic polymer film 13 containing the indicator substance, i.e. the metal, as droplets of an emulsion 14. In neither case is the metal in a film which is in direct contact with the organic substance.

In the same regard, the applicants submit that the Examiner has not considered Moretti et al. as a whole. Moretti et al. teaches a technique for the detection of thyrostatic drugs (which may be present in the thyroid gland of cattle) on thin-layer plates, for example, by thin-layer liquid chromatography. Although this technique uses a palladium II compound, it is for use as part of an analytical technique. Some steps of this technique are: spotting samples of items to be screened for sulfur compounds on filter paper, saturating the filter paper with the palladium solvent, and placing the paper into the appropriate solvent system.

The applicants maintain that the Office Action fails to establish a *prima facie* case of obviousness because there is no proper motivation to combine these two references. As stated previously, it is hindsight to suggest that a skilled person would combine a document that teaches a sensor for detecting gas phase spoilage products (Wolfbeis et al.) with a document teaching an analytical technique of bovine thyroid gland samples (Moretti et al.). The applicants appreciate the guidance given by the Examiner in response to this point in the Advisory Action. However, the Advisory Action only confirms that "the nature of the problem identified in both references" is the same. Merely being directed to the same general nature of a problem is not tantamount to a conclusion that a motivation to combine two references exists. The nature of the problem as identified by the Examiner, i.e., identifying sulfur compounds, comes up in two drastically different fields in these two references. In any event, the Examiner has not yet provided any specific motivation to combine these two references through some teaching, suggestion, or motivation found in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

Even assuming that it would have been obvious to combine the references in the manner that has been done, the applicants contend that one of ordinary skill in the art would have developed a system which does not meet all of the claim limitations. In particular, one of ordinary skill in the art would have developed a system with the metal complex necessarily shielded from the organic substance by, for example, a gas-permeable, hydrophobic polymer film as provided for in Wolfbeis. On the other hand, amended claims 1 and 9 of the present invention recite a sensor comprising a film of a sensor composition consisting of a metal co-ordinated complex and a resinous material, which complex, upon food spoilage or the opening or the compromise of packaging, undergoes a ligand exchange reaction to release a detectable component by the preferential binding of a gaseous substance to the metal(s) atoms of the complex. Claim 1 recites that the sensor comprises "a film of a sensor composition on an

internal surface of the packaging or a label retained inside packaging." In addition, claim 9 recites the step of "applying to an internal surface of the package a film of a sensor composition or inserting a label coated with a film of a sensor composition to be retained within the package." In sum, because of the metals used in Wolfbeis, the metal in the film is never in direct contact with the gases from the organic substance. Therefore, if a person of ordinary skill would have combined Wolfbeis et al. with Moretti et al., the metal complex of Moretti et al. would have been in the emulsion embodiment of Figure 2 or behind the gas-permeable, hydrophobic polymer film of the Figure 1 embodiment.

#### **IV. Conclusion**

In view of the arguments set forth above, the applicants respectfully request withdrawal of the rejections and request early notification of allowance.

Respectfully submitted,



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